



Vanguard SmartProcedures™ Procedure Human Factor Enhancements

P = print enhancement

E = electronic enhancement

W = writer enhancement

ITEM #	HUMAN FACTOR	Procedure Media/ Impact
1.	User-designed FlexViews based on functional user need	P, E
2.	SingleStep walkthroughs for training	E
3.	SingleStep walkthroughs for procedure reviews	E
4.	SingleStep walkthroughs for just-in-time	E
5.	Visual cues for user-notifications (warnings, cautions)	P, E
6.	Audio cues for user-notifications (warnings, cautions)	E
7.	Universal term and acronym glossary for increased understanding and clarification	P,E
8.	Access to equipment information for enhanced equipment information. Mechanical reliability.	E
9.	Pre-procedure checklist with procedure, activity and equipment and personnel summary providing enhanced information	P,E
10.	Automated rules and styles and templates and step types to standardize procedures and removing variances. Templates are programmatically created based on step properties and rules	W,P, E
11.	Use of multimedia to support tasks and provide training or work clarification.	P, E
12.	Linked basis information automates information access	W, P, E
13.	Procedure portability and mobility based on use of handheld	E
14.	Text-to-speech aid for procedure writers	W
15.	Text-to-speech aid for performers	E
16.	Ability to provide additional acknowledgement requirements for warnings and cautions	E, P

17. Instant feedback for data entry steps indicating alarms, warnings, links and ability to branch to alternate procedures or steps	E
18. Reduce lower-level formatting requirements enabling writers to concentrate on procedure optimization	W
19. Ability to collect and analyze data or data trends and trigger additional actions	E
20. Automated notification triggers for faster reviews and increased responsiveness	E
21. Ability to collect MOC change requests during procedure performance, reviews and training in real time with performers.	E
22. Collaborative procedures enabling control room operators to monitor procedure activity in real time (using wireless) including review of alarms, flags and user notations	E
23. Operators can set up timers, alarms, flags or notes at step level for automated, interactive notifications and reminders	E
24. If INPO, NRC, Westinghouse, etc., recommends or dictates template or human factor changes, changes can be incorporated immediately based on new templates and step properties	W
25. Mission critical database security provides greater security to ensure data integrity (arbitrary or non-authorized changes to procedures, templates, data cannot be made without proper security access and items are under revision control).	E, P, W
26. Can reduce radiation exposure at several levels by reducing manpower verification requirements	E, P
27. SAM (Step Analyzer Module) provides standardization, human error reduction recommendations to optimize procedure writing	E, P, W
28. Ability to link job assignments to procedures and tasks and cross reference against training qualifications, knowledge, skills and abilities in training database	E
29. Incorporate barcode or RFID scanners for positive equipment verification to ensure correct equipment	E
30. Associate equipment, special equipment, hardware and personnel to asset management database to determine availability or potential issues	E

31. Incorporate graphics and diagrams at step level to provide work guidance and task clarification. Also used for visual identification to reduce errors	E, P
32. Provide instant access to sub-procedures and reference documents to minimize searching.	E
33. Provide additional electronic sign-off or verifications at step level with higher data integrity than non-verified signatures or initials.	E
34. Provide mechanism to allow user to minimize non-essential information objects for increased procedure usability (on/off for non-essential graphics, document attachments, glossary/equipment term highlighting, revision-bars, etc.)	E, P

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